This Page Is Inserted by IFW Operations and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):



BLACK BORDERS

- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

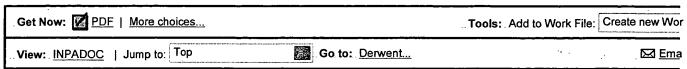
IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

THIS PAGE BLANK (USPTO)



The Delphion Integrated View



Title: JP4206366A2: FLAT BATTERY

PCountry: JP Japan

智Kind: A.

PInventor: NAKAI KENJI;

HIGASHIMOTO KOJI; HIRONAKA KENSUKE; HAYAKAWA TAKUMI;

KOMAKI AKIO; NAKANAGA TAKEFUMI;

TANIGUCHI MASATOSHI;

PAssignee: SHIN KOBE ELECTRIC MACH CO LTD.

OTSUKA CHEM CO. LTD.

News, Profiles, Stocks and More about this company.

Published / Filed: 1992-07-28 / 1990-11-30

Application JP1990

n JP1990000333743

Number: PIPC Code:

H01M 10/40; H01M 4/02;

Priority Number: 1990-11-30 JP1990000333743

PAbstract:

PURPOSE: To prevent the aggravation of the battery performance by laminating a flat positive electrode active material and a negative electrode active material through a solid electrolyte, covering these generating elements with a collector, divisionally forming the positive electrode active material on the collector, and

sealing the peripheral part by a sealing material.

sheath and a collector 1, an aqueous solution of vanadium pentoxide which is a positive electrode material 2 is finely applied by means of screen printing, dried and heated. For example, a 1,2-dimethoxyethane(DME) solution of a polyphosphadine derivative in which 1mol/l of lithium perchlorate is dissolved is applied thereon by means of screen printing, and the DME is evaporated to form a solid electrolyte 3. A metal lithium foil is stuck thereon as a negative electrode active material 4, and further covered with the stainless foil of a collector 1', and the peripheral part is thermally fused by a sealing material 5 such as a modified polyethylene resin and sealed. Thus, the aggravation of the battery performance can be prevented.

... COPYRIGHT: (C)1992, JPO& Japio ...

Family: None

POther Abstract None









this for the Gallery...

© 1997-2003 Thomson Delphion

Research Subscriptions | Privacy Policy | Terms & Conditions | Site Map | Contac



The Delphion Integrated View

Title: JP4206366A2: FLAT BATTERY

Country: JP Japan

> HIGASHIMOTO KOJI; HIRONAKA KENSUKE; HAYAKAWA TAKUMI;

KOMAKI AKIO;

NAKANAGA TAKEFUMI; TANIGUCHI MASATOSHI;

PAssignee: SHIN KOBE ELECTRIC MACH CO LTD.

OTSUKA CHEM CO LTD.

News, Profiles, Stocks and More about this company.

Published / Filed: 1992-07-28 / 1990-11-30

Papplication JP1990000333743.

Number:

PIPC Code: H01M 10/40; H01M 4/02;

Priority Number: 1990-11-30 JP1990000333743

PAbstract:

PURPOSE: To prevent the aggravation of the battery performance by laminating a flat positive electrode active material and a negative electrode active material through a solid electrolyte, covering these generating elements with a collector, divisionally forming the positive electrode active material on the collector, and

sealing the peripheral part by a sealing material.

CONSTITUTION: On a stainless foil used as both a battery sheath and a collector 1, an aqueous solution of vanadium pentoxide which is a positive electrode material 2 is finely applied by means of screen printing, dried and heated. For example, a 1,2-dimethoxyethane(DME) solution of a polyphosphadine derivative in which 1mol/l of lithium perchlorate is dissolved is applied thereon by means of screen printing, and the DME is evaporated to form a solid electrolyte 3. A metal lithium foil is stuck thereon as a negative electrode active material 4, and further covered with the stainless foil of a collector 1', and the peripheral part is thermally fused by a sealing material 5 such as a modified polyethylene resin and sealed. Thus, the aggravation of the battery performance can be prevented.

COPYRIGHT: (C)1992, JPO& Japio

Pramily: None

POther Abstract None









this for the Gallery...

© 1997-2003 Thomson Delphion Research Subscriptions | Privacy Policy | Terms & Conditions | Site Map | Contac



(11) Publication number:

04

Generated Document.

PATENT ABSTRACTS OF JAPAN

(21) Application number: 02333743

(51) Intl. Cl.: **H01M 10/40** H01M 4/02

LTD

(22) Application date: 30.11.90

(30) Priority:

(43) Date of application

publication:

28.07.92

(84) Designated contracting states:

(72) Inventor: NAKAI KENJI HIGASHIMOTO КОЛ HIRONAKA KENSUKE HAYAKAWA TAKUMI KOMAKI AKIO

(71) Applicant: SHIN KOBE ELECTRIC

NAKANAGA TAKEFUM TANIGUCHI MASATOSH

OTSUKA CHEM CO.LT

(74) Representative:

(54) FLAT BATTERY

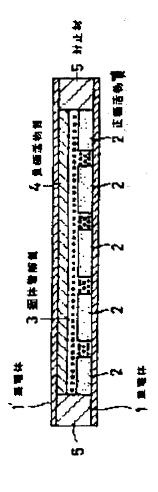
(57) Abstract:

PURPOSE: To prevent the aggravation of the battery. performance by laminating a flat positive electrode active material and a negative electrode active material through a solid electrolyte, covering these generating elements with a collector, divisionally forming the positive electrode active material on the collector, and sealing the peripheral part by a sealing material.

CONSTITUTION: On a stainless foil used as both a battery sheath and a collector 1, an aqueous solution of vanadium pentoxide which is a positive electrode material 2 is finely applied by means of screen printing, dried and heated. For example, a 1,2dimethoxyethane(DME) solution of a

polyphosphadine derivative in which 1mol/l of lithium perchlorate is dissolved is applied thereon by means of screen printing, and the DME is evaporated to form a solid electrolyte 3. A metal lithium foil is stuck thereon as a negative electrode active material 4, and further covered with the stainless foil of a collector 1', and the peripheral part is thermally fused by a sealing material 5 such as a modified polyethylene resin and sealed. Thus, the aggravation of the battery performance can be prevented.

COPYRIGHT: (C)1992,JPO&Japio





(11) Publication number:

04

Generated Document.

PATENT ABSTRACTS OF JAPAN

(21) Application number: 02333743

(51) Intl. Cl.: **H01M 10/40** H01M 4/02

(71) Applicant: SHIN KOBE ELECTRIC

(22) Application date: **30.11.90**

(30) Priority:

(43) Date of application

publication:

28.07.92

(84) Designated contracting states:

LTD OTSUKA CHEM CO'LT

(72) Inventor: NAKAI KENJI

HIGASHIMOTO KOJI HIRONAKA KENSUKE

HAYAKAWA TAKUMI

KOMAKI AKIO

NAKANAGA TAKEFUM TANIGUCHI MASATOSH

(74) Representative:

(54) FLAT BATTERY

(57) Abstract:

PURPOSE: To prevent the aggravation of the battery performance by laminating a flat positive electrode active material and a negative electrode active material through a solid electrolyte, covering these generating elements with a collector, divisionally forming the positive electrode active material on the collector, and sealing the peripheral part by a sealing material.

CONSTITUTION: On a stainless foil used as both a battery sheath and a collector 1, an aqueous solution of vanadium pentoxide which is a positive electrode material 2 is finely applied by means of screen printing, dried and heated. For example, a 1,2-dimethoxyethane(DME) solution of a

polyphosphadine derivative in which 1mol/l of lithium perchlorate is dissolved is applied thereon by means of screen printing, and the DME is evaporated to form a solid electrolyte 3. A metal lithium foil is stuck thereon as a negative electrode active material 4, and further covered with the stainless foil of a collector 1', and the peripheral part is thermally fused by a sealing material 5 such as a modified polyethylene resin and sealed. Thus, the aggravation of the battery performance can be prevented.

COPYRIGHT: (C)1992,JPO&Japio

